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(54) Title: PROCESSING AND DELIVERY OF AUDIO–VIDEO INFORMATION

(57) Abstract

An automated real–time system for processing and distribution of audio–video data. The system performs automated, real–time analysis and scene detection, segmentation, indexing, and encoding of video for real–time presentation, browsing, or searching. By using automated real–time processing of audio–video data sources, the data is available to a user (a viewer) without a substantial delay that would be introduced by manual or off–line (batch oriented) automatic processing of the data. The processing is arranged in a pipelined process, reducing processing delays and requiring less intermediate storage than a batch–oriented processing approach. The audio–video sources are segmented into individual scenes, such as one story in a news broadcast, thereby allowing a user to access portions of source programming without having to view or scan through the entire programs or to specify a particular time interval. The system also makes combined use of video, audio, and closed–caption information in an audio–video signal to identify individual scenes. This combined use of multiple sources of information provides an improved scene detection capability. Characterization of individual scenes is based on a variety of sources of information including, for example, the closed–caption text and the output of a speech recognizer analyzing the audio information in the signal.